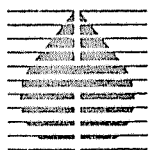


0
00
00
F

FIELD DATA FROM PART 1
OFF-SITE SURFACE WATER RUNOFF SAMPLING
MONTROSE SITE
TORRANCE, CALIFORNIA



HARGIS+ASSOCIATES, INC.
Consultants in Hydrogeology



HARGIS + ASSOCIATES, INC.

Consultants in Hydrogeology

1111 Avenida del Mar, Suite 300
Torrance, California 90501
(310) 274-0000

March 25, 1987

VIA FEDERAL EXPRESS

Mr. Therese Gioia
Environmental Protection Specialist
ENVIRONMENTAL PROTECTION AGENCY (T-4-2)
Toxics and Waste Management Division
215 Fremont Street
San Francisco, CA 94105

RE: Field Note Submittal, Part 1 Off-Site Surface Water Storm
Runoff Sampling, Montrose Site, near Torrance, California

Dear Ms. Gioia:

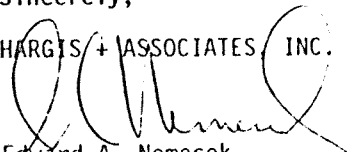
Per the terms of the Consent Order Part II, B, 2, enclosed please find the field data from the recently completed off-site surface water storm runoff sampling near the Montrose site. The information provided is from five separate storm events which exceeded 0.2 inches of rainfall. A storm event which exceeded the 0.75-inch event described in the sampling plan evidently did not occur during the winter rainy season in the vicinity of the Montrose site.

Samples were collected by Hargis + Associates, Inc. during the first runoff event. Samples from events 2 through 5 were collected by Brown and Caldwell Laboratory under contract to Hargis + Associates, Inc.

It is my understanding that this completes the field work described in the off-site sampling plan with the exception of the work on Farmers Brothers Coffee Company property. If you have any questions concerning this submittal, or any other part of the RIW at the Montrose site, please contact me.

Sincerely,

HARGIS + ASSOCIATES, INC.


Edward A. Nemecek
Senior Associate

Enclosure

cc: See Attached List

EAN/bm

MONTROSE CARBON COPY LIST:

Ms. Therese B. Gioia
EPA Coordinator (T-4-2)
US Environmental Protection Agency, Region IX
215 Fremont Street
San Francisco, CA 94105

Mr. Robert P. Ghirelli
Executive Officer
Regional Water Quality Control Board
107 S. Broadway, Room 4027
Los Angeles, CA 90012

Mr. Angelo Bellomo
Chief, Southern California Section
Toxic Substances Control Division
Department of Health Services
107 S. Broadway, Room 7128
Los Angeles, CA 90012

Mr. Dan Greeno
Montrose Chemical Corporation
Nyalia Farm Road
Westport, CT 06881

Karl S. Lytz, Esq.
Latham & Watkins
701 B Street
Suite 2100
San Diego, CA 92101

FIELD DATA FROM PART 1
OFF-SITE SURFACE WATER RUNOFF SAMPLING
MONTROSE SITE
TORRANCE, CALIFORNIA

TABLE OF CONTENTS

	Page
INTRODUCTION.....	1
OFF-SITE SURFACE WATER RUNOFF SAMPLING, PRECIPITATION EVENT 1.....	2
OFF-SITE SURFACE WATER RUNOFF SAMPLING, PRECIPITATION EVENT 2.....	3
OFF-SITE SURFACE WATER RUNOFF SAMPLING, PRECIPITATION EVENT 3.....	5
OFF-SITE SURFACE WATER RUNOFF SAMPLING, PRECIPITATION EVENT 4.....	7
OFF-SITE SURFACE WATER RUNOFF SAMPLING, PRECIPITATION EVENT 5.....	11
IDENTIFICATION OF SPLIT SAMPLES.....	18
IDENTIFICATION OF FIELD BLANKS.....	19
WEATHER DESCRIPTIONS.....	20

ILLUSTRATIONS

Figure

- 1 OFF-SITE SURFACE WATER RUNOFF SAMPLING LOCATIONS, WET WEATHER,
SEPTEMBER, 1986-MARCH, 1987

HARGIS ASSOCIATES

FIELD DATA FROM PART 1
OFF-SITE SURFACE WATER RUNOFF SAMPLING
MONTROSE SITE
TORRANCE, CALIFORNIA

INTRODUCTION

The following information, required by EPA Consent Order 85-04, consists of field data from the off-site surface water storm runoff sampling. The information was collected during the five precipitation events required under the order. Sampling of a storm event with a minimum precipitation of 0.75 inches was not possible due to insufficient rainfall. Field data are grouped according to precipitation events, beginning in September, 1986 and ending in March, 1987.

Split and field blank sample identification tables are included on pages 18 and 19. Split sample ID's are also noted in the surface water sample information adjacent to the primary sample ID. Weather information follows the field data. Sample locations are presented in Figure 1.



HARGIS & ASSOCIATES, INC.

OFF-SITE SURFACE WATER RUNOFF SAMPLING
PRECIPITATION EVENT 1

0836

OFF-SITE SURFACE WATER RUNOFF SAMPLING
PRECIPITATION EVENT 1

SAMPLE ID: R1-SW1
DATE: September 24, 1986
R1-SW1 could not be sampled due to insufficient flow.

SAMPLE ID: R1-SW2; SPLIT SAMPLE ID: R1-SW200
DATE: September 24, 1986
SAMPLING METHOD: GRAB
SAMPLE DESCRIPTION: Water is yellowish-brown.

SAMPLE ID: R1-SW3
DATE: September 24, 1986
SAMPLING METHOD: GRAB
SAMPLE DESCRIPTION: Water is yellowish-brown.

SAMPLE ID: R1-SW4
DATE: September 24, 1986
SAMPLING METHOD: GRAB

SAMPLE ID: R1-SW5
DATE: September 24, 1986
SAMPLING METHOD: GRAB

Note: Field measurements for pH, conductivity and temperature were not obtained.

HARGIS & ASSOCIATES INC.

OFF-SITE SURFACE WATER RUNOFF SAMPLING
PRECIPITATION EVENT 2

06891

HARGIS - ASSOCIATES, INC.

OFF-SITE SURFACE WATER RUNOFF SAMPLING
PRECIPITATION EVENT 2

SAMPLE ID:	R2-SW1
DATE:	January 4, 1987
SAMPLING METHOD:	GRAB
pH:	6.3
CONDUCTIVITY:	3900 micromhos per centimeter
TEMPERATURE:	14 °C
SAMPLE ID:	R2-SW2; SPLIT SAMPLE ID: R2-SW200
DATE:	January 4, 1987
SAMPLING METHOD:	GRAB
pH:	6.6
CONDUCTIVITY:	50 micromhos per centimeter
TEMPERATURE:	14 °C
SAMPLE ID:	R2-SW3
DATE:	January 4, 1987
SAMPLING METHOD:	GRAB
pH:	5.1
CONDUCTIVITY:	2500 micromhos per centimeter
TEMPERATURE:	14 °C

OFF-SITE SURFACE WATER RUNOFF SAMPLING
PRECIPITATION EVENT 2 (continued)

SAMPLE ID: R2-SW4
DATE: January 4, 1987
SAMPLING METHOD: GRAB
pH: 6.6
CONDUCTIVITY: 140 micromhos per centimeter
TEMPERATURE: 15 °C

SAMPLE ID: R2-SW5
DATE: January 4, 1987
SAMPLING METHOD: GRAB
pH: 6.4
CONDUCTIVITY: 120 micromhos per centimeter
TEMPERATURE: 14 °C



HARGIS - ASSOCIATES, INC.

17680

OFF-SITE SURFACE WATER RUNOFF SAMPLING
PRECIPITATION EVENT 3

HARGIS ASSOCIATES, INC.

OFF-SITE SURFACE WATER RUNOFF SAMPLING
PRECIPITATION EVENT 3

SAMPLE ID:	R3-SW1
DATE:	January 6, 1987
SAMPLING METHOD:	GRAB
pH:	6.9
CONDUCTIVITY:	1300 micromhos per centimeter
TEMPERATURE:	12 °C
SAMPLE ID:	R3-SW2
DATE:	January 6, 1987
SAMPLING METHOD:	GRAB
pH:	7.1
CONDUCTIVITY:	75 micromhos per centimeter
TEMPERATURE:	11 °C
SAMPLE ID:	R3-SW3; SPLIT SAMPLE ID: R3-SW300
DATE:	January 6, 1987
SAMPLING METHOD:	GRAB
pH:	6.5
CONDUCTIVITY:	130 micromhos per centimeter
TEMPERATURE:	11 °C

OFF-SITE SURFACE WATER RUNOFF SAMPLING
PRECIPITATION EVENT 3 (continued)

SAMPLE ID: R3-SW4
DATE: January 6, 1987
SAMPLING METHOD: GRAB
pH: 6.8
CONDUCTIVITY: 75 micromhos per centimeter
TEMPERATURE: 12 °C

SAMPLE ID: R3-SW5
DATE: January 6, 1987
SAMPLING METHOD: GRAB
pH: 6.3
CONDUCTIVITY: 100 micromhos per centimeter
TEMPERATURE: 11 °C



HARGIS ASSOCIATES INC

08971

OFF-SITE SURFACE WATER RUNOFF SAMPLING
PRECIPITATION EVENT 4



HARGIS - ASSOCIATES, INC.

OFF-SITE SURFACE WATER RUNOFF SAMPLING
PRECIPITATION EVENT 4

SAMPLE ID:	R4-SW1; SPLIT SAMPLE ID: R4-SW100
DATE:	February 13, 1987
SAMPLING METHOD:	GRAB
pH:	9.0
CONDUCTIVITY:	700 micromhos per centimeter
TEMPERATURE:	18 °C
SAMPLE ID:	R4-SW2
DATE:	February 13, 1987
SAMPLING METHOD:	GRAB
pH:	8.2
CONDUCTIVITY:	90 micromhos per centimeter
TEMPERATURE:	17 °C
SAMPLE ID:	R4-SW3
DATE:	February 13, 1987
SAMPLING METHOD:	GRAB
pH:	7.8
CONDUCTIVITY:	150 micromhos per centimeter
TEMPERATURE:	13 °C

OFF-SITE SURFACE WATER RUNOFF SAMPLING
PRECIPITATION EVENT 4 (continued)

SAMPLE ID:	R4-SW4
DATE:	February 13, 1987
SAMPLING METHOD:	GRAB
pH:	7.6
CONDUCTIVITY:	200 micromhos per centimeter
TEMPERATURE:	17 °C
SAMPLE ID:	R4-SW5; SPLIT SAMPLE ID: R4-SW500
DATE:	February 13, 1987
SAMPLING METHOD:	GRAB
pH:	7.6
CONDUCTIVITY:	170 micromhos per centimeter
TEMPERATURE:	13 °C
SAMPLE ID:	R4-SW6 (COMPOSITE)
DATE:	February 13, 1987
DEPTH OF WATER:	8.4 feet
WATER VELOCITY:	0.45 feet per second
SAMPLING METHOD:	GRAB
pH:	7.8
CONDUCTIVITY:	170 micromhos per centimeter
TEMPERATURE:	16 °C

OFF-SITE SURFACE WATER RUNOFF SAMPLING
PRECIPITATION EVENT 4 (continued)

SAMPLE ID:	R4-SW7 (COMPOSITE)
DATE:	February 13, 1987
SAMPLING METHOD:	GRAB
pH:	7.5
CONDUCTIVITY:	290 micromhos per centimeter
TEMPERATURE:	17 °C
SAMPLE ID:	R4-SW8 (COMPOSITE)
DATE:	February 13, 1987
DEPTH OF WATER:	12.8 feet
WATER VELOCITY:	0.91 feet per second
SAMPLING METHOD:	GRAB
pH:	7.3
CONDUCTIVITY:	7500 micromhos per centimeter
TEMPERATURE:	18 °C
SAMPLE ID:	R4-SW9 (COMPOSITE)
DATE:	February 13, 1987
DEPTH OF WATER:	15.3 feet
WATER VELOCITY:	1.0 feet per second
SAMPLING METHOD:	GRAB
pH:	7.3
CONDUCTIVITY:	20,000 micromhos per centimeter
TEMPERATURE:	18 °C



HARGIS - ASSOCIATES, P.C.

OFF-SITE SURFACE WATER RUNOFF SAMPLING
PRECIPITATION EVENT 4 (continued)

SAMPLE ID:	R4-SW10 (COMPOSITE)
DATE:	February 13, 1987
DEPTH OF WATER:	16.1 feet
WATER VELOCITY:	0.38 feet per second
SAMPLING METHOD:	GRAB
pH:	7.3
CONDUCTIVITY:	28,000 micromhos per centimeter
TEMPERATURE:	21 °C



HARGIS - ASSOCIATES, INC.

10902

OFF-SITE SURFACE WATER RUNOFF SAMPLING
PRECIPITATION EVENT 5

OFF-SITE SURFACE WATER RUNOFF SAMPLING
PRECIPITATION EVENT 5

SAMPLE ID: R5-SW1; SPLIT SAMPLE ID: R5-SW100
DATE: March 6, 1987
SAMPLING METHOD: GRAB
pH: 7.0
CONDUCTIVITY: 2400 micromhos per centimeter
TEMPERATURE: 15 °C

SAMPLE ID: R5-SW2
DATE: March 6, 1987
SAMPLING METHOD: GRAB
pH: 6.9
CONDUCTIVITY: 130 micromhos per centimeter
TEMPERATURE: 16 °C

SAMPLE ID: R5-SW3; SPLIT SAMPLE ID: R5-SW300
DATE: March 6, 1987
SAMPLING METHOD: GRAB
pH: 7.0
CONDUCTIVITY: 230 micromhos per centimeter
TEMPERATURE: 16 °C



HARGIS ASSOCIATES, INC.

OFF-SITE SURFACE WATER RUNOFF SAMPLING
PRECIPITATION EVENT 5 (continued)

SAMPLE ID: R5-SW4
DATE: March 6, 1987
DEPTH OF WATER: 0.42 feet
WATER VELOCITY: 1.0 feet per second
SAMPLING METHOD: GRAB
pH: 7.1
CONDUCTIVITY: 100 micromhos per centimeter
TEMPERATURE: 16 °C

SAMPLE ID: R5-SW5
DATE: March 6, 1987
DEPTH OF WATER: 0.50 feet
WATER VELOCITY: 1.8 feet per second
SAMPLING METHOD: GRAB
pH: 7.1
CONDUCTIVITY: 270 micromhos per centimeter
TEMPERATURE: 17 °C

OFF-SITE SURFACE WATER RUNOFF SAMPLING
PRECIPITATION EVENT 5 (continued)

SAMPLE ID: R5-SW6 (COMPOSITE)
DATE: March 6, 1987
DEPTH OF WATER: 7.8 feet
WATER VELOCITY: 0.3 feet per second
SAMPLING METHOD: GRAB
pH: 7.0
CONDUCTIVITY: 9000 micromhos per centimeter
TEMPERATURE: 17 °C

SAMPLE ID: R5-SW7 (COMPOSITE)
DATE: March 6, 1987
SAMPLING METHOD: GRAB
pH: 7.1
CONDUCTIVITY: 11,000 micromhos per centimeter
TEMPERATURE: 19 °C

SAMPLE ID: R5-SW8 (COMPOSITE)
DATE: March 6, 1987
WATER VELOCITY: No measurement was taken because flow was upstream due to tidal influence.
SAMPLING METHOD: GRAB
pH: 7.2
CONDUCTIVITY: 16000 micromhos per centimeter
TEMPERATURE: 28 °C

OFF-SITE SURFACE WATER RUNOFF SAMPLING
PRECIPITATION EVENT 5 (continued)

SAMPLE ID: R5-SW9 (COMPOSITE)
DATE: March 6, 1987
DEPTH OF WATER: 11 feet
WATER VELOCITY: No measurement was taken because flow was upstream
due to tidal influence.
SAMPLING METHOD: GRAB
pH: 7.3
CONDUCTIVITY: 20,000 micromhos per centimeter
TEMPERATURE: 20 °C

SAMPLE ID: R5-SW10 (COMPOSITE)
DATE: March 6, 1987
WATER VELOCITY: No measurement was taken because flow was upstream
due to tidal influence.
SAMPLING METHOD: GRAB
pH: 7.4
CONDUCTIVITY: 19000 micromhos per centimeter
TEMPERATURE: 17 °C

SAMPLE ID: R5-SW11
DATE: March 6, 1987
SAMPLING METHOD: GRAB
pH: 7.5
CONDUCTIVITY: 31000 micromhos per centimeter
TEMPERATURE: 20 °C

OFF-SITE SURFACE WATER RUNOFF SAMPLING
PRECIPITATION EVENT 5 (continued)

SAMPLE ID: R5-SW12
DATE: March 6, 1987
SAMPLING METHOD: GRAB
pH: 7.6
CONDUCTIVITY: 34000 micromhos per centimeter
TEMPERATURE: 18 °C

SAMPLE ID: R5-SW13
DATE: March 6, 1987
SAMPLING METHOD: GRAB
pH: 7.6
CONDUCTIVITY: 34000 micromhos per centimeter
TEMPERATURE: 17 °C

SAMPLE ID: R5-SW14
DATE: March 6, 1987
SAMPLING METHOD: GRAB
pH: 7.6
CONDUCTIVITY: 34000 micromhos per centimeter
TEMPERATURE: 17 °C

OFF-SITE SURFACE WATER RUNOFF SAMPLING
PRECIPITATION EVENT 5 (continued)

SAMPLE ID:	R5-SW15
DATE:	March 6, 1987
SAMPLING METHOD:	GRAB
pH:	7.6
CONDUCTIVITY:	34000 micromhos per centimeter
TEMPERATURE:	17 °C
SAMPLE ID:	R5-SW16
DATE:	March 6, 1987
SAMPLING METHOD:	GRAB
pH:	7.7
CONDUCTIVITY:	34000 micromhos per centimeter
TEMPERATURE:	18 °C
SAMPLE ID:	R5-SW17
DATE:	March 6, 1987
SAMPLING METHOD:	GRAB
pH:	7.7
CONDUCTIVITY:	34000 micromhos per centimeter
TEMPERATURE:	17 °C

OFF-SITE SURFACE WATER RUNOFF SAMPLING
PRECIPITATION EVENT 5 (continued)

SAMPLE ID: R5-SW18
DATE: March 6, 1987
SAMPLING METHOD: GRAB
pH: 7.6
CONDUCTIVITY: 34000 micromhos per centimeter
TEMPERATURE: 17 °C

SAMPLE ID: R5-SW19
DATE: March 6, 1987
SAMPLING METHOD: GRAB
pH: 7.6
CONDUCTIVITY: 34000 micromhos per centimeter
TEMPERATURE: 17 °C

SAMPLE ID: R5-SW20
DATE: March 6, 1987
SAMPLING METHOD: GRAB
pH: 7.6
CONDUCTIVITY: 34000 micromhos per centimeter
TEMPERATURE: 17 °C



HARGIS ASSOCIATES, INC.

0910

IDENTIFICATION OF SPLIT AND FIELD BLANK SAMPLES

HARGIS + ASSOCIATES, P.C.

IDENTIFICATION OF SPLIT SAMPLES

<u>SPLIT SAMPLE ID</u>	<u>DATE</u>	<u>PRIMARY SAMPLE ID</u>
R1-SW200	09-24-86	R1-SW2
R1-SW200 (FILTERED)	09-24-86	R1-SW2 (FILTERED)
R2-SW200	01-04-87	R2-SW2
R3-SW300	01-06-87	R3-SW3
R4-SW100	02-13-87	R4-SW1
R4-SW500	02-13-87	R4-SW5
R5-SW100	03-06-87	R5-SW1
R5-SW300	03-06-87	R5-SW3



HARCIS - ASSOCIATES, INC.

IDENTIFICATION OF FIELD BLANK SAMPLES

<u>DATE</u>	<u>FIELD BLANK SAMPLE ID</u>
09-24-86	R1-WB1
01-04-87	R2-WB1
01-06-87	R3-WB1
02-13-87	R4-WB1
03-06-87	R5-WB1



HARGIS & ASSOCIATES INC.

101
W

WEATHER DESCRIPTIONS

WEATHER DESCRIPTIONS

DATE: September 24, 1986 (Precipitation Event 1)
RAINFALL: 0.29 inches at Torrance Airport
SOURCE: LACFCD

DATE: December 20, 1986
RAINFALL: No rainfall at Long Beach Airport
SOURCE: Long Beach Airport

DATE: January 4, 1987 (Precipitation Event 2)
RAINFALL: 0.4 inches at Compton Creek Station
SOURCE: LACFCD

DATE: January 6, 1987 (Precipitation Event 3)
RAINFALL: 0.30 inches at Long Beach Airport
SOURCE: Long Beach Airport

DATE: January 28, 1987
RAINFALL: 0.04 inches at Compton Creek Station
SOURCE: LACFCD

DATE: February 9, 1987
RAINFALL: 0.01 inches at Alamitos Station
SOURCE: LACFCD

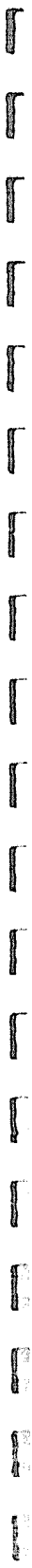


WEATHER DESCRIPTIONS (continued)

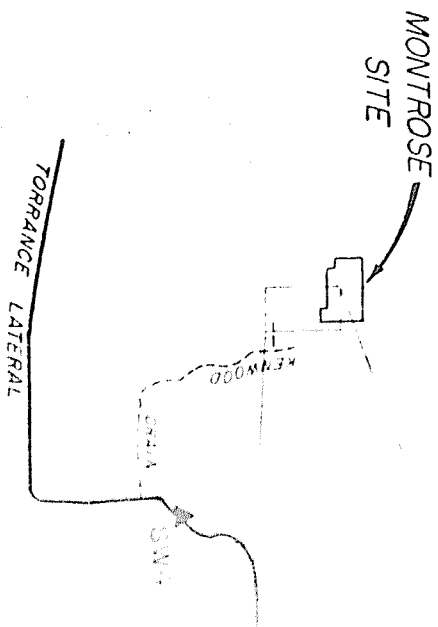
DATE:	February 10, 1987
RAINFALL:	0.08 inches at Montrose Site
SOURCE:	Rain Gauge at Montrose Site
DATE:	February 13, 1987 (Precipitation Event 4)
RAINFALL:	0.38 inches at Montrose Site
SOURCE:	Rain Gauge at Montrose Site
DATE:	February 22, 1987
RAINFALL:	0.01 inches at Montrose Site
SOURCE:	Rain Gauge at Montrose Site
DATE:	February 23, 1987
RAINFALL:	0.05 inches at Montrose Site
SOURCE:	Rain Gauge at Montrose Site
DATE:	February 26, 1987
RAINFALL:	0.12 inches at Montrose Site
SOURCE:	Rain Gauge at Montrose Site
DATE:	March 6, 1987 (Precipitation Event 5)
RAINFALL:	0.30 inches at Montrose Site
SOURCE:	Rain Gauge at Montrose Site

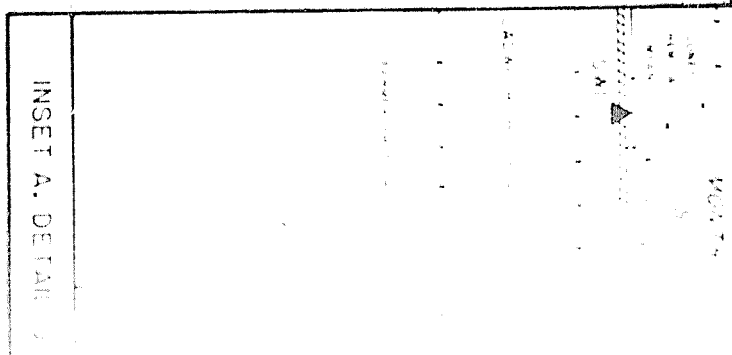
0916

Illustrations

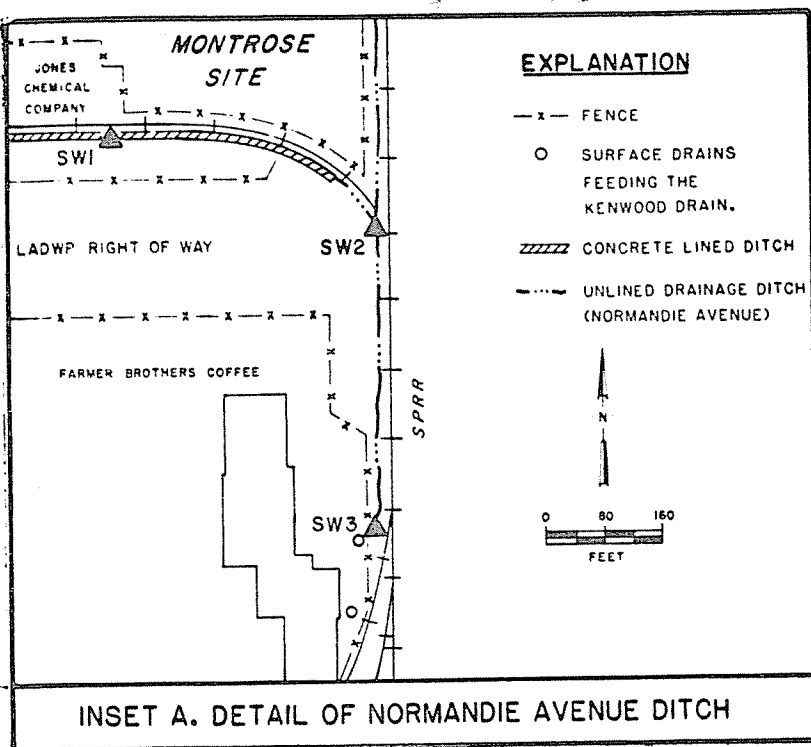


0917





0919

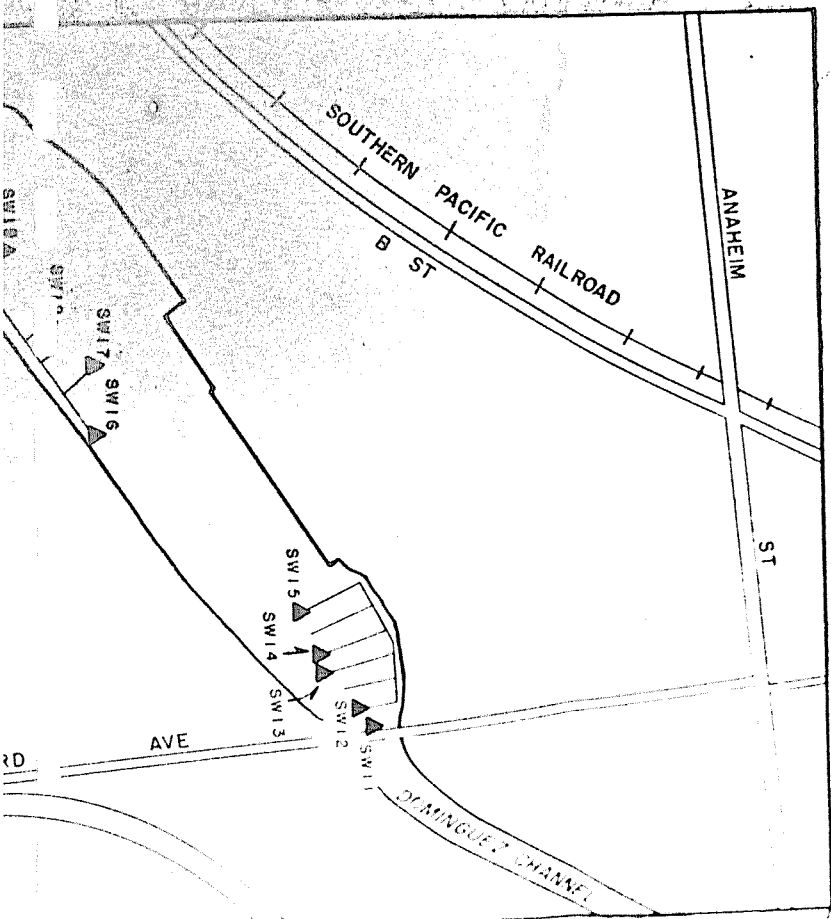


EXPLANATION

▲ SW7

SURFACE WATER SAMPLING LOCATION

109201





1000 I

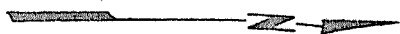
SW9 ▲

SW10 ▲



105221

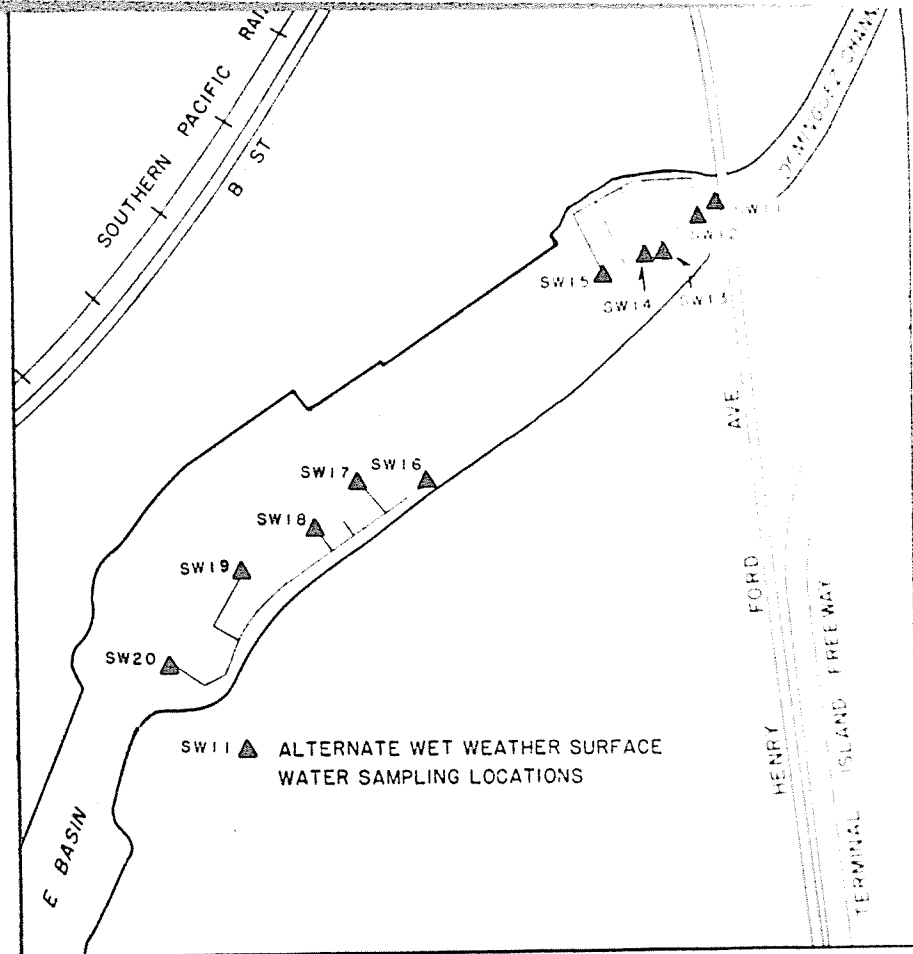
0 1000 2000 3000 4000 5000
FEET



0922

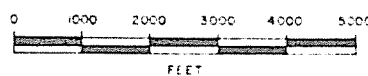
AREA ENLARGED

0923



INSET B. DETAIL OF CONSOLIDATED SLIP

0925




MONTROSE SITE TORRANCE, CALIFORNIA	
OFF-SITE SURFACE WATER SAMPLING LOCATIONS WET WEATHER SEPTEMBER, 1986-MARCH, 1987	
 HARGIS + ASSOCIATES, INC. Consultants in Hydrogeology San Diego, California	3/87
PREPARED BY _____	REVIEWED BY _____

FIGURE 1